CLAIMS

1. Pneumatic tyre comprising at least a temperature indicator including at least one reactive substance having a threshold temperature and at least one dye substance having at least a characteristic peak in its absorption or emission spectrum, so that when an excess temperature is reached in the tyre the at least one reactive substance is heated above the threshold temperature and reacts with the at least one dye substance so as to modify said characteristic peak of the at least one dye substance.

2. Pneumatic tyre according to claim 1 comprising at least two temperature indicators.

3. Pneumatic tyre according to claim 2 wherein the at least two temperature indicators contain different reactive substances having different threshold temperatures.

4. Pneumatic tyre according to claim 2 the at least two temperature indicators are positioned in axial sequence between the crown shoulder and the equatorial plane of the tyre.

5. Pneumatic tyre according to claim 1 wherein the dye substance is a carbonyl dye.

6. Pneumatic tyre according to claim 1 wherein the reactive substance is a radical initiator.

7. Pneumatic tyre according to claim 6 wherein the radical initiator is a peroxide.

8. Pneumatic tyre according to claim 6 wherein the radical initiator is paramethyl benzoyl peroxide.

9. Pneumatic tyre according to claim 6 wherein the molar ratio radical initiator:dye substance is of from about 50:1 to about 150:1.

10. Pneumatic tyre according to claim 9 wherein the molar ratio radical initiator:dye substance is of from about 90:1 to about 120:1.

11. Pneumatic tyre according to claim 1 wherein said at least temperature indicator comprises an opaque medium.

12. Pneumatic tyre according to claim 11 wherein said opaque medium is selected from titanium dioxide, calcium carbonate, silica, sodium sulfate, or mixtures thereof.

13. Pneumatic tyre according to claim 1 wherein said at least temperature indicator comprises a binding material.

14. Pneumatic tyre according to claim 1 wherein said at least temperature indicator is coated by a binding material.

15. Pneumatic tyre according to claims 13 or 14 wherein said binding material is a cross-linkable material or a material with low temperature-vulcanizing or -polymerizing properties.

16. Pneumatic tyre according to claim 15 wherein said binding material comprises (C1-8)alkyl-cyano-acrylates.

17. Pneumatic tyre according to claim 1 wherein said temperature indicator is applied on the surface of an adhesive substrate, which is then applied onto the tyre.

18. Temperature indicator comprising at least one reactive substance having a threshold temperature and at least one dye substance having at least a characteristic peak in its absorption or emission spectrum, so that when an excess temperature is reached in the tyre the at least one reactive substance is heated above the threshold temperature and reacts with the at least one dye substance so as to modify said characteristic peak of the at least one dye substance.